

Water Businesses Pitch Innovations to the Oil & Gas Sector

On 28 October, around 70 people gathered in the Ian McLachlan Room at Adelaide Oval to hear the latest water innovations from businesses in the water sector. The collaborative event was coordinated by the Water Industry Alliance (WIA) in conjunction with the Roundtable for Oil and Gas Projects and the Industry Capability Network (ICN). The event platform provided a new style for both presenters and attendees alike, to fill a need identified by the Roundtable for the provision of innovative solutions to water issues in the oil and gas sector. Before pitching at this event, the water businesses were first required to enter a pitching competition, from which a shortlist of just under a dozen businesses were selected and then provided with pitch training in preparation for the event. Given that they each had only five minutes in which to get their message across, the training was vital.

The Water Industry Alliance provided training from John O'Brien, Managing Director of Australia Cleantech and facilitator of the Australian Technologies Competition. John took participants through the importance of having a good 'elevator pitch', that is being able to communicate what your business is and the value of this, in the time it takes from getting into a lift to leaving. It's harder than it seems – so preparation was important.

John assisted participants to work through their value proposition, and to develop it based on the premises of '*We do **this** so that our customer gets **that**.*'

On the day, the quality of business pitches was very good. Water Industry Alliance CEO, Andy Roberts, chaired the event ensuring the day ran to time. Due to the quality of the training participants received, they were able to get their message across within the allocated five minutes.

Professor Craig Simmons, Chair of Working Group #3 of the Roundtable for Oil and Gas Projects (focusing on water) and Director of the National Centre for Groundwater Research and Training welcomed attendees on behalf of the Roundtable and advised that an unconventional gas water impact study is under way.

Eddie Ivar, Supply Consultant, ICN, provided an overview of key water issues facing Cooper Basin operators, for example there is excess co-produced water with relatively low TDS from oil wells on the western flank, while shale gas development will require large volumes of water for hydraulic fracturing. Supply of potable water and disposal of sewage effluent is also an issue in remote areas.

The water business pitches provided possible solutions for operators to consider:

- Aqueon has specialist expertise in managed aquifer recharge, including in high pressure, large volume and high temperature applications. This could potentially be used for the management of excess co-produced water.
- Hydrosmart uses physical water treatment to prevent the build-up of scale and remove existing scale. They presented a flowchart incorporating their technology in the use of water for hydraulic fracturing as well as recycling flowback water from the hydraulic fracturing process.
- Micromet uses continuous flow electrolysis to treat wastewater, with a small footprint, quick commissioning, fast treatment cycles and lower energy usage than older generation

electrolysis. Their system is not susceptible to changes in pollutants, temperature and other shocks like traditional biological treatment.

- Maric Flow Control use a proprietary valve design including a rubber ring that deforms to ensure the same flowrate regardless of pressure. Potential uses in the oil and gas industry include process water control for water treatment through sensitive media, safety showers and eye wash stations.
- Advanced Material Solutions use patented metallic filtration technology that includes titanium for advanced filtration. Possible applications in the oil and gas industry are for oil/water separation as the technology breaks emulsification in conjunction with laminar flow. The filters have a long life, are easy to clean and can handle a variety of pH, pressure and temperature conditions, including steam.
- Osmoflo presented their new Osmoflo Brine Squeezer, which is now being deployed for the Narrabri Gas Project. It's provided as a containerised plant prefabricated in Adelaide to reduce site installation costs. They have a large rental fleet of desalination equipment in Australia and can provide a variety of finance solutions.
- Hydrus has mobile, relocatable treatment units with capacity up to 840 kilolitres per day to treat hydraulic fracturing flowback water and produced water, and have partnered with Nitschke Energy Services to deliver their services to industry.
- GHD presented case studies on the treatment of petroleum refinery and biodiesel wastewater to meet strict discharge requirements, for example the use of zeolites to trap metals.
- Hydro-dis Water Treatment Systems chlorinate water using an electrical technique to release the chloride that is already in the water – no chemical addition is required to convert feedwater into potable water. Minimum requirements are 250 mg/l TDS and 20 mg/l Chloride, which is well within the range of many feedwaters.
- Sentek showed how low TDS formation water could be used to grow feed for livestock, thus turning a liability into an asset and providing a benefit to pastoralists. Their technology uses sensor probes and software to manage irrigation levels and maintain the soil water content within the optimum range, and this can be managed remotely via satellite.
- Guidera O'Connor is a local construction firm specialising in the design and construction of water treatment and pumping infrastructure.

During afternoon tea and at the conclusion of the event there was ample opportunity for networking over drinks and canapes, as well as enjoying the cricket game that was in progress at the time – the South Australian Redbacks vs. the NSW Blues in the Sheffield Shield match.

The event was a great example of the benefits of collaboration between industry and government to link new innovations and technologies across industries to solve water issues in the Cooper Basin.

For more information:

ICN: <http://www.icn.org.au/>

WIA: <http://www.waterindustry.com.au/>